

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for selecting inverse discrete cosine transform (iDCT) algorithms, comprising:

a) examining the coefficients of a plurality of DCT blocks corresponding to selected frames within a video shot to determine an End of Block (EOB) length for each of the examined DCT blocks, wherein a video shot is a sequence of frames bounded on each side by a video transition;

b) selecting a most frequent EOB length associated with the video shot;

c) selecting an iDCT algorithm for the video shot from a plurality of iDCT algorithms according to the selected most frequent EOB length; and

d) executing the selected iDCT algorithm.

2. (Cancelled)

3. (Currently Amended) The method of claim 1 ~~claim-2~~, wherein said plurality of iDCT algorithm is includes an iDCT Normal algorithm, an iDCT AC algorithm, an iDCT high algorithm, an iDCT low algorithm and an iDCT DC algorithm ~~an iDCT low algorithm available to said method and selected using an EOB histogram of the first B-frame of the shot.~~

4. (Currently Amended) A system for reducing iDCT execution time, said system comprising:

a) ~~determination means~~ for examining the coefficients of a plurality of DCT blocks corresponding to selected frames within a video shot in order to determining an End of Block (EOB) length in a for each of the examined DCT blocks, wherein a video shot is a sequence of frames bounded on each side by a video transition;

b) selection means for selecting a most frequent EOB length associated with the video shot;

c) selection means for selecting an iDCT algorithm for the video shot from a plurality of iDCT algorithms based upon the said selected most frequent EOB length ~~and using an EOB length histogram for a number of B-frames;~~ and

ed) execution means for executing said selected iDCT algorithm.

5. (Cancelled)

6. (Currently Amended) A computer program encoded on a computer readable medium containing instructions for selecting and executing inverse discrete cosine transform (iDCT) algorithms, said instructions performing the steps of:

a) examining the coefficients of a plurality of DCT blocks corresponding to selected frames within a video shot to determine an End of Block (EOB) length for each of the examined DCT blocks based upon the position of the End of Block (EOB) coefficient;

b) selecting a most frequent EOB length associated with the video shot;

e) selecting an iDCT algorithm from a plurality of iDCT algorithms according to the selected most frequent EOB length ~~and using an EOB length histogram for B-frames;~~ and

c) executing said iDCT algorithm.

7. (Currently Amended) The method of claim 31 wherein said iDCT_high algorithm is based upon an EOB length of 39 or 50.

8. (Previously Presented) The method of claim 3 wherein said iDCT_low algorithm is based upon an EOB length of 14 or 25.

9. (Previously Presented) The medium of claim 22 wherein said iDCT_high algorithm is

based upon an EOB length of 39 or 50.

10. (Previously Presented) The medium of claim 22 wherein said iDCT_low algorithm is based upon an EOB length of 14 or 25.

11. (Currently Amended) A system for reducing inverse discrete cosine transform (iDCT) execution time, said system comprising:

a) a memory for storing a plurality of iDCT algorithms comprising an iDCT_high algorithm and an iDCT_low algorithm;

b) ~~a switch for selecting a selected algorithm from said plurality of iDCT algorithms and using a histogram of an End of Block (EOB) lengths for a number of B-frames; and~~

c) a computer processor for examining the coefficients of a plurality of DCT blocks corresponding to selected frames within a video shot to determine an End of Block (EOB) length for each of the examined DCT blocks, wherein a video shot is a sequence of frames bounded on each side by a video transition, selecting a most frequent EOB length associated with the video shot, and generating an iDCT algorithm selection signal that identifies the iDCT algorithm to be executed by the processor; and

a switch connected to the processor and the memory that receives the selection signal from the processor and, in response, selects the identified iDCT algorithm for execution by the processor.

12. (Previously Presented) The system of claim 11 wherein said switch accepts as input:

- a) a block of DCT coefficients;
- b) an End of Block address; and
- c) a picture type bit rate.

13. (Currently Amended) The system of claim 11 wherein said plurality of iDCT algorithms further comprises: an iDCT Normal algorithm, an iDCT AC algorithm, an iDCT high algorithm, an iDCT low algorithm and an iDCT DC algorithm

~~iDCT_Normal, iDCT_AC and iDCT_DC.~~

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Currently Amended) The method of claim 1 ~~claim 18~~ wherein the video transition ~~includes one of~~ from a group comprising: a cut frame, a dissolve, or a cross-dissolve.

20. (Cancelled)

21. (Cancelled)

22. (Currently Amended) ~~The medium~~ The system of claim 4 ~~6~~ wherein the plurality of iDCT algorithms includes an iDCT Normal algorithm, an iDCT AC algorithm, an iDCT high algorithm, an iDCT low algorithm and an iDCT DC algorithm at least one of: ~~iDCT_Normal, iDCT_AC, iDCT_high, iDCT_low and iDCT_DC.~~

23. (New) A method as recited in claim 1, further comprising:
generating a histogram of EOB lengths for the examined DCT blocks representing a relative frequency of occurrence of EOB lengths for the shot, wherein the most frequent EOB length corresponds to the EOB length having the highest frequency of occurrence.
24. (New) A method as recited in claim 1, wherein the selected frames are B frames.
25. (New) A method as recited in claim 1, further comprising:
repeating (a) – (d) for a next video shot until a current video shot is a last video shot.
26. (New) The system as recited in claim 4, further comprising:
means for generating a histogram of EOB lengths for the examined DCT blocks representing a relative frequency of occurrence of EOB lengths for the shot, wherein the most frequent EOB length corresponds to the EOB length having the highest frequency of occurrence.
27. (New) The system as recited in claim 4, wherein the selected frames are B frames.
28. (New) The system as recited in claim 4, wherein the system selects an iDCT algorithm and executes the selected iDCT algorithm for each of the video shots in a video.